

Educational Product

Educators & Students

Grades 5-12

ET-2004-10-129-ARC

Educational Topic

Center Air Traffic Controller

Related Job Titles:

En Route Controller, Air Traffic Controller, TRACON Controller, Air Traffic Specialist

Job Description:

Center Air Traffic Controllers use both radar, visual information and radio communications to direct and monitor air traffic so it flows, smoothly, efficiently and safely through US airspace. Center Air Traffic Controllers work from FAA Center Facilities. One Center facility is located within each Center Airspace (21 in the US). Center Air Traffic Controllers monitor movement of aircraft and give instructions to pilots for routing through the airspace. They give clearance to pilots for altitude and course changes within their Center airspace. They hand-off flights to the TRACON Controllers for descent procedures for landing within the Center airspace. Center Air Traffic Controllers also provide weather updates to pilots. One of their primary duties is to provide and maintain separation among aircraft in the Center airspace.

Interests / Abilities:

- Can you visualize a 2-dimensional picture in a 3dimensional way?
- Is it easy for you to use a computer to get information and to help you solve problems?
- Do you like to work independently as well as with a team?
- Can you easily make many decisions within a short time frame?
- Can you stay focused for a long time on a task without becoming bored?

Education / Training Needed:

A two or four year college degree must be obtained before initiation of Air Traffic Control (ATC) training. You must then successfully pass the Federal Aviation Administration (FAA) aptitude test before beginning Air Traffic Control Training through the FAA. Additional computer training is beneficial for this job.

Suggested School Subjects / Courses:

- Physics
- · Aeronautics or science of flight
- Meteorology
- Aviation
- · Algebra and graphing of equations
- · Computer training

Areas of expertise:

- · Must have excellent listening and communication skills
- Thorough knowledge of the air traffic management system and the FAA regulations

Additional Resources:

- Earth to Orbit: Engineering Design Challenges http://eto.nasa.gov/
 - FAA Academy Homepage http://www.academy.jccbi.gov/
- Federal Aviation Administration http://www.faa.gov/
- Graduate Student Researchers Program http://spacelink.nasa.gov/Instructional.Materials/NASA.Educa tional.Products/Graduate.Student.Researchers.Program.Brochur e/.index.htmlt
- MATHCOUNTS Competition http://mathcounts.org/
- Mike Monroney Aeronautical Center (FAA Training Center)
 http://www.mmac.jccbi.gov/mmac
- Minority University Research and Education Programs http://mured.nasaprs.com/
- NASA Cooperative Education Program for college students http://spacelink.nasa.gov/Educational.Services/

NASA.Education.Programs/Student.Support/NASA.Cooperative .Education.Program/.index.html

- NASA Jobs http://nasajobs.nasa.gov/
- NASA SHARP Internship Program for highschoolers http://www.mtsibase.com/sharp/
- NASA Student Employment http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- NASA Student Involvement Program student contests http://www.nsip.net/index.cfm

What can I do right now?

- · Spend time playing logic puzzles.
- Spend time drawing maps from memory.
- Learn how to read all the different kinds of aeronautical charts.
- · Take a ground school course.
- Join Civil Air Patrol (CAP) and participate in their activities.
- Visit Virtual Skies to practice your problem solving skills by engaging in some computer activities that have you review information and assess a situation in a short amount of time (e.g. air traffic control simulation, flight simulation). http://virtualskies.arc.nasa.gov

- National Association of Air Traffic Specialists (NAATS) http://www.naats.org/
- Professional Women Controllers, Inc. http://www.pwcinc.org/
- Revolutionary Vehicle Concepts and Systems student competition http://avst.larc.nasa.gov/competitions.html
- School of Aviation Science Air Traffic Control http://www.aviation.wmich.edu/home.html
- Tech-Interns.com http://www.tech-interns.com/
- Please take a moment to evaluate this product at:
- http://ehb2.gsfc.nasa.gov/edcats/educational topic
- Your evaluation and suggestions are vital to continually improving NASA educational materials.
- Thank you.



http://quest.nasa.gov/people/index.html

Center Controller ET-2004-10-129-ARC